Table C17
Elutriate Analysis
Site 3BS96 Sediment Mixed With Water From Site 3BS96

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
Antimony	<0.30	<0.0030 ppm	<0.0030 ppm		
Arsenic	7.06	0.0031 ppm	0.0041 ppm		
Arsenic (total)					
Arsenic (III)				360	190
Beryllium	1.0	<0.001 ppm	<0.001 ppm		
Cadmium	0.580	<0.00020 ppm	<0.00020 ppm		
Chromium	20.0	<0.0010 ppm	<0.0010 ppm		
Chromium (III)				1700	210
Copper	20.7	0.0015 ppm	<0.0010 ppm	19.2	12.8
Lead	20.5	<0.0010 ppm	<0.0010 ppm	82	3.2
Mercury	**1.95**	**<0.00020 ppm**	**<0.00020 ppm**	**2.4**	**0.1210**
Nickel	23.5	<0.0010 ppm	<0.0010 ppm	1400	160
Selenium	0.60	<0.0020 ppm	<0.0020 ppm		
Silver	0.11	<0.0010 ppm	<0.0010 ppm		
Thallium	0.27	<0.0020 ppm	<0.0020 ppm		
Zinc	85.5	<0.010 ppm	<0.010 ppm	120	110
B-BHC	<0.011	<0.00050 ppm	0.000081 ppm		
G-BHC	<0.011	<0.00010 ppm	<0.00010 ppm	5.3	0.21
D-BHC	<0.011	<0.000050 ppm	<0.000051 ppm		
PPDDD	**<0.021**	**<0.00020 ppm**	**<0.00020 ppm**	**0.03**	**0.006**
PPDDE	<0.021	<0.00010 ppm	<0.00010 ppm	52.5	10.5

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
PPDDT	**<0.021**	**<0.00020 ppm**	**<0.00020 ppm**	**1.10**	**0.0010**
Heptachlor	**<0.015**	**<0.00010 ppm**	**<0.00010 ppm**	**0.52**	**0.0038**
Dieldrin	**<0.011**	**<0.00020 ppm**	**<0.00020 ppm**	**2.5**	**0.0019**
A-Endosulfan	**<0.011**	**<0.00010 ppm**	**<0.00010 ppm**		
B-Endosulfan	**<0.011**	**<0.00010 ppm**	**<0.00010 ppm**		
Endosulfan				0.22	0.056
TRP Hydrocarbons					
Aldrin	<0.011	<0.000050 ppm	<0.000050 ppm	3.0	
A-BHC	<0.011	<0.00010 ppm	<0.00010 ppm		
Endosulfan sulfate	<0.021	<0.00020 ppm	<0.00020 ppm		
Endrin	**<0.032**	**<0.00020 ppm**	**<0.00020 ppm**	**0.18**	**0.0023**
Endrin Aldehyde	<0.021	<0.00020 ppm	<0.00020 ppm		
Heptachlor Epoxide	<0.011	<0.000050 ppm	<0.000050 ppm		
Methoxychlor	<0.011	<0.00075 ppm	<0.00075 ppm	2.1	
Chlordane	**<0.011**	**<0.000050 ppm**	**<0.000050 ppm**	**2.4**	**0.0043**
Toxaphene	**<0.11**	**<0.000050 ppm**	**<0.00050 ppm**	**0.21**	
PCB-1016	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1221	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1232	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1242	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1248	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1254	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1260	**<0.21**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
Phenol	<1.7	<0.010 ppm	<0.010 ppm	700	350
2-Chlorophenol	<1.7	<0.010 ppm	<0.010 ppm	258	129
2-Nitrophenol	<1.7	<0.010 ppm	<0.010 ppm		
2,4-Dimethylphenol	<3.4	<0.020 ppm	<0.020 ppm		
2,4-Dichlorophenol	<1.7	<0.010 ppm	<0.010 ppm		
4-Chloro-3-Methylphenol	<1.7	<0.010 ppm	<0.010 ppm		
2,4,6-Trichlorophenol	<1.7	<0.010 ppm	<0.010 ppm		
2,4-Dinitrophenol	<4.1	<0.025 ppm	<0.025 ppm		
4-Dinitrophenol					
4-Nitrophenol	<4.1	<0.025 ppm	<0.025 ppm		
2-Methyl-4,6-Dinotrophenol	<4.1	<0.025 ppm			
Pentachlorophenol	<4.1	<0.025 ppm	<0.025 ppm	13	
Benzoic Acid	<4.1	<0.025 ppm	<0.025 ppm		
2-Methylphenol	<1.7	<0.010 ppm	<0.010 ppm		
4-Methylphenol	<1.7	<0.010 ppm	<0.010 ppm		
2,4,5-Trichlorophenol	<1.7	<0.010 ppm	<0.010 ppm		
Benzyl Alcohol	<4.1	<0.010 ppm	<0.010 ppm		
N-Nitrosodimethylamine	<1.7	<0.010 ppm	<0.010 ppm		
Bis(2-Chloroisopropyl)Ether	<1.7	<0.010 ppm	<0.010 ppm		
N-Nitroso-Di-N-Propylamine	<1.7	<0.010 ppm	<0.010 ppm		
Nitrobenzene	<1.7	<0.010 ppm	<0.010 ppm		

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
Isophorone	<1.7	<0.010 ppm	<0.010 ppm		
Bis(2-Chloroethoxy)Methane	<1.7	<0.010 ppm	<0.010 ppm		
2,6-Dinitrotoluene	<1.7	<0.010 ppm	<0.010 ppm		
2,4-Dinitrotoluene	<1.7	<0.010 ppm	<0.010 ppm		
1,2-Diphenylhydrazine					
Benzidine	<3.6	<0.050 ppm	<0.050 ppm	250	125
3,3'Dichlorobenzidine	<3.4	<0.020 ppm	<0.020 ppm		
Bis(2-Chloroethyl)Ether	<1.7	<0.010 ppm	<0.010 ppm		
1,3-Dichlorobenzene	<1.7	<0.010 ppm	<0.010 ppm		
1,4-Dichlorobenzene	<1.7	<0.010 ppm	<0.010 ppm		
1,2-Dichlorobenzene	<1.7	<0.010 ppm	<0.010 ppm		
Hexachloroethane	<1.7	<0.010 ppm	<0.010 ppm		
1,2,4-Trichlorobenzene	<1.7	<0.010 ppm	<0.010 ppm		
Naphthalene	<1.7	<0.010 ppm	<0.010 ppm		
Hexachlorobutadiene	**<1.7**	**<0.010 ppm**	**<0.010 ppm**	**5.1**	**1.02**
Hexachlorocyclopentadiene	<1.7	<0.010 ppm	<0.010 ppm		
2-Chloronaphthalene	<1.7	<0.010 ppm	<0.010 ppm		
Acenaphthylene	<1.7	<0.010 ppm	<0.010 ppm		
Dimehtyl Phthalate	<1.7	<0.010 ppm	<0.010 ppm		
Acenaphthene	0.19 J	<0.010 ppm	<0.010 ppm		
Fluorene	0.19 J	<0.010 ppm	<0.010 ppm		
Diethyl Phthalate	<1.7	<0.010 ppm	<0.010 ppm		

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
4-ChlorophenylPhenyl Ether	<1.7	<0.010 ppm	<0.010 ppm		
N-Nitrosodiphenyl Amine	<1.7	<0.010 ppm	<0.010 ppm		
4-Bromophenyl Ether	<1.7	<0.010 ppm	<0.010 ppm		
Hexachlorobenzene	<1.7	<0.010 ppm	<0.010 ppm		
Phenanthrene	1.6 J	<0.010 ppm	<0.010 ppm		
Anthracene	0.49 J	<0.010 ppm	<0.010 ppm		
Dibutylphthalate	0.51 J	0.0045 J ppm	<0.010 ppm		
Fluoranthene	1.7	<0.010 ppm	<0.010 ppm		
Pyrene	1.5 J	<0.010 ppm	<0.010 ppm		
Butylbenzylphthalate	<1.7	<0.010 ppm	<0.010 ppm		
Chrysene	0.71 J	<0.010 ppm	<0.010 ppm		
Benzo(a)Anthracene	0.74 J	<0.010 ppm	<0.010 ppm		
Bis(2-Ethylexyl)Phthalate	0.29 J	<0.010 ppm	<0.010 ppm		
Di-N-Octylphthalate	<1.7	<0.010 ppm	0.0012 B J ppm		
Benzo(b)Fluoranthene	0.54 J	<0.010 ppm	<0.010 ppm		
Benzo(k)Fluoranthene	0.52 J	<0.010 ppm	<0.010 ppm		
Benzo(a)Pyrene	0.62 J	<0.010 ppm	<0.010 ppm		
Indeno(1,2,3-C,D)Pyrene	0.42 J	<0.010 ppm	<0.010 ppm		
Dibenzo(A,H)Anthracene	0.36 J	<0.010 ppm	<0.010 ppm		
Benzo(G,H,I)Perylene	0.36 J	<0.010 ppm	<0.010 ppm		
Aniline	<1.7	<0.010 ppm	<0.010 ppm		
4-Chloroaniline	<1.7	<0.010 ppm	<0.010 ppm		
Dibenzofuran	<1.7	<0.010 ppm	<0.010 ppm		
2-Methylnaphthalene	<1.7	<0.010 ppm	<0.010 ppm		
2-Nitroaniline	<4.1	<0.025 ppm	<0.025 ppm		

3-Nitroaniline	<4.1	<0.025 ppm	<0.025 ppm		
4-Nitroaniline	<4.1	<0.025 ppm	<0.025 ppm		
Cyanide	<0.490	<0.005 ppm	<0.005 ppm		
Total Suspended Solids		122 ppm			

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

Table C18
Elutriate Analysis
Site 4BS96 Sediment Mixed With Water From Site 3BS96

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
Antimony	<0.30	<0.0030 ppm	<0.0030 ppm		
Arsenic	5.27	0.0031 ppm	0.0031 ppm		
Arsenic (total)					
Arsenic (III)				360	190
Beryllium	0.7	<0.001 ppm	<0.001 ppm		
Cadmium	0.405	<0.00020 ppm	<0.00020 ppm		
Chromium	14.1	<0.0010 ppm	<0.0010 ppm		
Chromium (III)				1700	210
Copper	14.6	0.0015 ppm	<0.0010 ppm	19.2	12.8
Lead	12.4	<0.0010 ppm	<0.0010 ppm	82	3.2
Mercury	**2.30**	**<0.00020 ppm**	**<0.00020 ppm**	**2.4**	**0.1210**
Nickel	18.6	<0.0010 ppm	<0.0010 ppm	1400	160
Selenium	0.45	<0.0020 ppm	<0.0020 ppm		
Silver	<0.10	<0.0010 ppm	<0.0010 ppm		
Thallium	0.23	<0.0020 ppm	<0.0020 ppm		
Zinc	61.3	<0.010 ppm	0.012 ppm	120	110
B-BHC	<0.0084	<0.00050 ppm	<0.000050 ppm		
G-BHC	<0.0084	<0.00010 ppm	<0.00010 ppm	5.3	0.21
D-BHC	<0.0084	<0.000050 ppm	<0.000051 ppm		
PPDDD	**<0.017**	**<0.00020 ppm**	**<0.00020 ppm**	**0.03**	**0.006**
PPDDE	<0.017	<0.00010 ppm	<0.00010 ppm	52.5	10.5

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICA CHRONIC CRITERIA (ug/L)
PPDDT	**<0.017**	**<0.00020 ppm**	**<0.00020 ppm**	**1.10**	**0.0010**
Heptachlor	**<0.012**	**<0.00010 ppm**	**<0.00010 ppm**	**0.52**	**0.0038**
Dieldrin	**<0.0084**	**<0.00020 ppm**	**<0.00020 ppm**	**2.5**	**0.0019**
A-Endosulfan	<0.0084	<0.00010 ppm	<0.00010 ppm	0.22	0.056
B-Endosulfan	<0.0084	<0.00010 ppm	<0.00010 ppm	0.22	0.056
Aldrin	<0.0084	<0.000050 ppm	<0.000050 ppm	3.0	
A-BHC	<0.0084	<0.00010 ppm	<0.00010 ppm		
Endosulfan sulfate	<0.017	<0.00020 ppm	<0.00020 ppm		
Endrin	**<0.025**	**<0.00020 ppm**	**<0.00020 ppm**	**0.18**	**0.0023**
Endrin Aldehyde	<0.017	<0.00020 ppm	<0.00020 ppm		
Heptachlor Epoxide	<0.0084	<0.000050 ppm	<0.000050 ppm		
Methoxychlor	<0.0084	<0.00075 ppm	<0.00075 ppm	2.1	
Chlordane	**<0.0084**	**<0.000050 ppm**	**<0.000050 ppm**	**2.4**	**0.0043**
Toxaphene	**<0.084**	**<0.000050 ppm**	**<0.00050 ppm**	**0.21**	
PCB-1016	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1221	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1232	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1242	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1248	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1254	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
PCB-1260	**<0.17**	**<0.00020 ppm**	**<0.00020 ppm**	**2.0**	**0.014**
Phenol	<1.4	<0.010 ppm	<0.010 ppm	700	350
2-Chlorophenol	<1.4	<0.010 ppm	<0.010 ppm	258	129
2-Nitrophenol	<1.4	<0.010 ppm	<0.010 ppm		

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
2,4-Dimethylphenol	<2.8	<0.020 ppm	<0.020 ppm		
2,4-Dichlorophenol	<1.4	<0.010 ppm	<0.010 ppm		
4-Chloro-3-Methylphenol	<1.4	<0.010 ppm	<0.010 ppm		
2,4,6-Trichlorophenol	<1.4	<0.010 ppm	<0.010 ppm		
2,4-Dinitrophenol	<3.4	<0.025 ppm	<0.025 ppm		
4-Nitrophenol	<3.4	<0.025 ppm	<0.025 ppm		
2-Methyl-4,6-Dinotrophenol	<3.4	<0.025 ppm	<0.025 ppm		
Pentachlorophenol	<3.4	<0.025 ppm	<0.025 ppm		
Benzoic Acid	<3.4	<0.025 ppm	<0.025 ppm		
2-Methylphenol	<1.4	<0.010 ppm	<0.010 ppm		
4-Methylphenol	<1.4	<0.010 ppm	<0.010 ppm		
2,4,5-Trichlorophenol	<1.4	<0.010 ppm	<0.010 ppm		
Benzyl Alcohol	<3.4	<0.010 ppm	<0.010 ppm		
N-Nitrosodimethylamine	<1.4	<0.010 ppm	<0.010 ppm		
Bis(2-Chloroisopropyl)Ether	<1.4	<0.010 ppm	<0.010 ppm		
N-Nitroso-Di-N-Propylamine	<1.4	<0.010 ppm	<0.010 ppm		
Nitrobenzene	<1.4	<0.010 ppm	<0.010 ppm		
Isophorone	<1.4	<0.010 ppm	<0.010 ppm		
Bis(2-Chloroethoxy)Methane	<1.4	<0.010 ppm	<0.010 ppm		
2,6-Dinitrotoluene	<1.4	<0.010 ppm	<0.010 ppm		
2,4-Dinitrotoluene	<1.4	<0.010 ppm	<0.010 ppm		
1,2-Diphenylhydrazine					
Benzidine	<7.0	<0.050 ppm	<0.050 ppm	250	125

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICA CHRONIC CRITERIA (ug/L)
3,3'Dichlorobenzidine	<2.8	<0.020 ppm	<0.020 ppm		
Bis(2-Chloroethyl)Ether	<1.4	<0.010 ppm	<0.010 ppm		
1,3-Dichlorobenzene	<1.4	<0.010 ppm	<0.010 ppm		
1,4-Dichlorobenzene	<1.4	<0.010 ppm	<0.010 ppm		
1,2-Dichlorobenzene	<1.4	<0.010 ppm	<0.010 ppm		
Hexachloroethane	<1.4	<0.010 ppm	<0.010 ppm		
1,2,4-Trichlorobenzene	<1.4	<0.010 ppm	<0.010 ppm		
Naphthalene	<1.4	<0.010 ppm	<0.010 ppm		
Hexachlorobutadiene	**<1.4**	**<0.010 ppm**	**<0.010 ppm**	**5.1**	**1.02**
Hexachlorocyclopentadiene	<1.4	<0.010 ppm	<0.010 ppm		
2-Chloronaphthalene	<1.4	<0.010 ppm	<0.010 ppm		
Acenaphthylene	<1.4	<0.010 ppm	<0.010 ppm		
Dimehtyl Phthalate	<1.4	<0.010 ppm	<0.010 ppm		
Acenaphthene	<1.4	<0.010 ppm	<0.010 ppm		
Fluorene	<1.4	<0.010 ppm	<0.010 ppm		
Diethyl Phthalate	<1.4	<0.010 ppm	<0.010 ppm		
4-Chlorophenyl Phenyl Ether	<1.4	<0.010 ppm	<0.010 ppm		
N-Nitrosodiphenyl Amine	<1.4	<0.010 ppm	<0.010 ppm		
4-Bromophenyl Ether	<1.4	<0.010 ppm	<0.010 ppm		
Hexachlorobenzene	<1.4	<0.010 ppm	<0.010 ppm		
Phenanthrene	0.16 J	<0.010 ppm	<0.010 ppm		
Anthracene	<1.4	<0.010 ppm	<0.010 ppm		
Dibutylphthalate	**0.41 J**	**0.0045ppm**	**<0.010 ppm**		
Fluoranathene	0.49 J	<0.010 ppm	<0.010 ppm		
Pyrene	0.41 J	<0.010 ppm	<0.010 ppm		

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

CONSTITUENT	BULK SEDIMENT (MG/KG)	WATER	ELUTRIATE	APPLICABLE ACUTE CRITERIA (ug/L)	APPLICABLE CHRONIC CRITERIA (ug/L)
Butylbenzylphthalate	<1.4	<0.010 ppm	<0.010 ppm		
Chrysene	0.22 J	<0.010 ppm	<0.010 ppm		
Benzo(a)Anthracene	0.16 J	<0.010 ppm	<0.010 ppm		
Bis(2-Ethylexyl)Phthalate	<1.4	<0.010 ppm	<0.010 ppm		
Di-N-Octyphthalate	<1.4	<0.010 ppm	0.0019 B J ppm		
Benzo(b)Fluoranthene	<1.4	<0.010 ppm	<0.010 ppm		
Benzo(k)Fluoranthene	0.15 J	<0.010 ppm	<0.010 ppm		
Benzo(a)Pyrene	<1.4	<0.010 ppm	<0.010 ppm		
Indeno(1,2,3-C,D)Pyrene	<1.4	<0.010 ppm	<0.010 ppm		
Dibenzo(A,H)Anthracene	<1.4	<0.010 ppm	<0.010 ppm		
Aniline	<1.4	<0.010 ppm	<0.010 ppm		
4-Chloroaniline	<1.4	<0.010 ppm	<0.010 ppm		
Benzo(G,H,I)Perylene	<1.4	<0.010 ppm	<0.010 ppm		
Dibenzofuran	<1.4	<0.010 ppm	<0.010 ppm		
2-Methylnaphthalene	<1.4	<0.010 ppm	<0.010 ppm		
2-Nitroaniline	<3.4	<0.025 ppm	<0.025 ppm		
3-Nitroaniline	<3.4	<0.025 ppm	<0.025 ppm		
4-Nitroaniline	<3.4	<0.025 ppm	<0.025 ppm		
Cyanide	<0.500	<0.005 ppm	<0.005 ppm		
Total Suspended Solids		122 ppm			

J – Indicates an estimated value below the laboratory reporting limit, but greater than the instrument detection limit.
B – Indicates analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
Bold Print indicates possible exceedances over LDEQ criteria or an increase in concemtration from ambient to elutriate.

A bottom surface sediment sample from Site 1BS96 was analyzed for the 1996 elutriate testing which was mixed with water collected from site 2BS96. The results of this analysis are listed under Table C15. This data was compared to the applicable freshwater acute and chronic aquatic life criteria. For the metals listed in Table C15, the level for mercury in the elutriate sample possibly exceeded the EPA freshwater chronic aquatic life criteria, although the acute criteria was not exceeded. However, the reported concentrations were based on the total concentration of the metals while the EPA criteria was based on the dissolved fraction for metals. The mercury concentration (<0.20 ug/L) possibly exceeded the chronic criteria of 0.1210 ug/L, but was below the acute criteria of 2.4 ug/L. It should be noted that whenever a value is preceded by the "less than" symbol (<), this indicates that the concentration is known to be less than the value reported. For the pesticides, the elutriate sample concentration of PPDDD (<0.4 ug/L) possibly exceeded the chronic criteria (0.006 ug/L) and the acute criteria (0.03 ug/L). The elutriate sample concentration of PPDDT (<0.4 ug/L) possibly exceeded the chronic criteria (0.001 ug/L) and the acute criteria (1.10 ug/L). The elutriate sample concentration of heptachlor (<0.2 ug/L) possibly exceeded the chronic criteria (0.0038 ug/L),but was less than the acute criteria (0.52 ug/L). The elutriate sample concentration of dieldrin (<0.4 ug/L) possibly exceeded the chronic criteria (0.0019 ug/L), but was less than the acute criteria (2.5 ug/L). The elutriate sample concentration of A and B endosulfan (<0.20 ug/L) possibly exceeded the chronic criteria (0.056 ug/L), but was less than the acute criteria (0.22 ug/L). The elutriate sample concentration of endrin (<0.4 ug/L) possibly exceeded the chronic criteria (0.0023 ug/L) and the acute criteria (0.18 ug/L). The elutriate sample concentration of chlordane (<0.1 ug/L) possibly exceeded the chronic criteria (0.0043 ug/L), but was less than the acute criteria (2.4 ug/L). The concentration of PCB's in the elutriate sample (<0.4 ug/L) possibly exceeded the chronic criteria (0.014 ug/L), but was less than the acute criteria (2.0 ug/L). A base/neutral extractable organic chemical, hexachlorobutadiene, with a concentration of <22 ug/L possibly exceeded the acute criteria (5.1 ug/L) and the chronic criteria (1.02 ug/L). The level of copper increased from an ambient concentration of 14 ug/L to an elutriate concentration of 22 ug/L. However, the elutriate concentration is below the LDEQ criteria. All of the constituents from site 1BS96 with the exception of metals indicated possible increases from ambient concentrations. However, these increases in concentrations do not necessarily indicate that the constituents are being released in the water column due to the elutriate test. These increases are due to increases in detection limits from ambient to elutriate concentrations.

A bottom surface sediment sample from Site 2BS96 was analyzed for the 1996 elutriate testing which was mixed with water collected from site 2BS96. The results of this analysis are listed under Table C16. This data was compared to the applicable freshwater acute and chronic aquatic life criteria. For the metals listed in Table C16, the level for mercury in the elutriate sample possibly exceeded the EPA freshwater chronic aquatic life criteria, although the acute criteria was not exceeded. However, the reported concentrations were based on the total concentration of the metals while the EPA criteria was based on the dissolved fraction for metals. The mercury concentration (<0.20 ug/L) possibly exceeded the chronic criteria of 0.1210 ug/L, but was below the acute criteria of 2.4 ug/L. For the pesticides, the elutriate sample concentration of PPDDD (<0.21 ug/L) possibly exceeded the chronic criteria (0.006 ug/L) and the acute criteria (0.03 ug/L). The elutriate sample concentration of PPDDT (<0.21 ug/L) possibly exceeded the chronic criteria (0.001 ug/L) and the acute criteria (1.10 ug/L). The elutriate sample concentration of heptachlor (<0.10 ug/L) possibly exceeded the chronic criteria (0.0038 ug/L), but was less than the acute criteria (0.52 ug/L). The elutriate sample concentration of dieldrin (<0.21 ug/L) possibly exceeded the chronic criteria (0.0019 ug/L), but was less than the acute criteria (2.5 ug/L). The elutriate sample concentration of A and B endosulfan (<0.10 ug/L) possibly exceeded the chronic criteria (0.056 ug/L), but was less than the acute criteria (0.22 ug/L). The elutriate sample concentration of endrin (<0.21 ug/L) possibly exceeded the chronic criteria (0.0023 ug/L) and the acute criteria (0.18 ug/L). The elutriate sample concentration of chlordane (<0.052 ug/L) possibly exceeded the chronic criteria (0.0043 ug/L),but was less than the acute criteria (2.4 ug/L). The elutriate sample concentration of toxaphene (<0.52 ug/L) possibly exceeded the acute criteria (0.21 ug/L). The concentration of PCB's in the elutriate sample (<0.21 ug/L) possibly exceeded the chronic criteria (0.014 ug/L), but was less than the acute criteria (2.0 ug/L). A base/neutral extractable organic chemical, hexachlorobutadiene, with a concentration of <10 ug/L possibly exceeded the acute criteria (5.1 ug/L) and the chronic criteria (1.02 ug/L). The concentration of B-BHC increased from an ambient concentration of <0.076 ug/L to 0.083 ug/L. The concentration of dibutylphthalate increased from an ambient concentration of 3.7 ug/L to an elutriate concentration of 5.7 ug/L. The concentration of butylbenzylphthalate increased from an ambient concentration of <10 ug/L to an elutriate concentration of 18 ug/L.

A bottom surface sediment sample from Site 3BS96 was analyzed for the 1996 elutriate testing which was mixed with water collected from site 3BS96. The results of this analysis are listed under Table C17. This data was compared to the applicable freshwater acute and chronic aquatic life criteria. For the metals listed in Table C17, the level for mercury in the elutriate sample

exceeded the EPA freshwater chronic aquatic life criteria, although the acute criteria was not exceeded. However, the reported concentrations were based on the total concentration of the metals while the EPA criteria was based on the dissolved fraction for metals. The mercury concentration (<0.20 ug/L) possibly exceeded the chronic criteria of 0.1210 ug/L, but was below the acute criteria of 2.4 ug/L. For the pesticides, the elutriate sample concentration of PPDDD (<0.20 ug/L) possibly exceeded the chronic criteria (0.006 ug/L) and the acute criteria (0.03 ug/L). The elutriate sample concentration of PPDDT (<0.20 ug/L) possibly exceeded the chronic criteria (0.001 ug/L) and the acute criteria (1.10 ug/L). The elutriate sample concentration of heptachlor (<0.10 ug/L) possibly exceeded the chronic criteria (0.0038 ug/L), but was less than the acute criteria (0.52 ug/L). The elutriate sample concentration of dieldrin (<0.20 ug/L) possibly exceeded the chronic criteria (0.0019 ug/L), but was less than the acute criteria (2.5 ug/L). The elutriate sample concentration of endosulfan (<0.10 ug/L) possibly exceeded the chronic criteria (0.056 ug/L), but was less than the acute criteria (0.22 ug/L). The elutriate sample concentration of endrin (<0.20 ug/L) possibly exceeded the chronic criteria (0.0023 ug/L) and the acute criteria (0.18 ug/L). The elutriate sample concentration of chlordane (<0.050 ug/L) possibly exceeded the chronic criteria (0.0043 ug/L), but was less than the acute criteria (2.4 ug/L). The elutriate sample concentration of toxaphene (<0.50 ug/L) possibly exceeded the acute criteria (0.21 ug/L). The concentration of PCB's in the elutriate sample (<0.20 ug/L) possibly exceeded the chronic criteria (0.014 ug/L), but was less than the acute criteria (2.0 ug/L). A base/neutral extractable organic chemical, hexachlorobutadiene, with a concentration of <10 ug/L possibly exceeded the acute criteria (5.1 ug/L) and the chronic criteria (1.02 ug/L).

A bottom surface sediment sample from Site 4BS96 was analyzed for the 1996 elutriate testing which was mixed with water collected from site 3BS96. The results of this analysis are listed under Table C18. This data was compared to the applicable freshwater acute and chronic aquatic life criteria. For the metals listed in Table C18, the level for mercury in the elutriate sample possibly exceeded the EPA freshwater chronic aquatic life criteria, although the acute criteria was not exceeded. However, the reported concentrations were based on the total concentration of the metals while the EPA criteria was based on the dissolved fraction for metals. The mercury concentration (<0.20 ug/L) possibly exceeded the chronic criteria of 0.1210 ug/L, but was below the acute criteria of 2.4 ug/L. For the pesticides, the elutriate sample concentration of PPDDD (<0.20 ug/L) possibly exceeded the chronic criteria (0.006 ug/L) and the acute criteria (0.03 ug/L). The elutriate sample concentration of PPDDT (<0.20 ug/L) possibly exceeded the chronic criteria (0.001 ug/L), but was less than the acute criteria (1.10 ug/L). The elutriate sample

concentration of heptachlor (<0.10 ug/L) possibly exceeded the chronic criteria (0.0038 ug/L), but was less than the acute criteria (0.52 ug/L). The elutriate sample concentration of dieldrin (<0.20 ug/L) possibly exceeded the chronic criteria (0.0019 ug/L), but was less than the acute criteria (2.5 ug/L). The elutriate sample concentration of endosulfan (<0.10 ug/L) possibly exceeded the chronic criteria (0.056 ug/L), but was less than the acute criteria (0.22 ug/L). The elutriate sample concentration of endrin (<0.20 ug/L) possibly exceeded the chronic criteria (0.0023 ug/L) and the acute criteria (0.18 ug/L). The elutriate sample concentration of chlordane (<0.050 ug/L) possibly exceeded the chronic criteria (0.0043 ug/L), but was less than the acute criteria (2.4 ug/L). The elutriate sample concentration of toxaphene (<0.50 ug/L) possibly exceeded the acute criteria (0.21 ug/L). The concentration of PCB's in the elutriate sample (<0.20 ug/L) possibly exceeded the chronic criteria (0.014 ug/L), but was less than the acute criteria (2.0 ug/L). A base/neutral extractable organic chemical, hexachlorobutadiene, with a concentration of <10 ug/L possibly exceeded the acute criteria (5.1 ug/L) and the chronic criteria (1.02 ug/L). The concentration of dibutylphthalate increased from an ambient concentration of 4.5 ug/L to an elutriate concentration of 10 ug/L.

C2.3.4.3 Summary and Discussion. Water quality impacts to the Alternate Route due to the construction of a new lock at Bayou Sorrel include temporary suspension of sedimentary particles releasing material with high chemical and biological demands. In addition, turbidity will be increased in the construction area. The clearing of land for access and construction will increase the erosion of the banks and possibly increase the pH in the waterway. However, environmental practices to reduce erosion can be performed. These adverse effects are temporary in nature and will diminish soon after the completion of the project.

An elutriate test was performed on four samples taken in the vicinity of Bayou Sorrel Lock. The results indicated that possible exceedances above the EPA freshwater aquatic life criteria in all four elutriate samples were detected. However, the constituents that had exceedances in the elutriate samples also had exceedances in the ambient water samples. While this discussion addresses both chronic and acute levels for the EPA freshwater aquatic life criteria, the applicable criteria is the acute due to the short-term nature of the project. Constituents from all four elutriate samples which possibly exceed EPA chronic aquatic life criteria but were below the acute criteria include mercury, heptachlor, dieldrin, endosulfan, and chlordane. In addition, the constituents from all four elutriate samples which possibly exceed EPA chronic and acute aquatic life criteria include PPDDD, PPDDT, endrin, toxaphene and hexacholorobutadiene. However, it should be

noted that the when a constituent is referred to as possibly violating EPA criteria, this is because the detection limits were above the criteria. The elutriate sample from site 1BS96 indicated an increase in copper concentrations from ambient to elutriate samples. However, the elutriate concentration is below the LDEQ acute and chronic criteria. In addition, the composite sample for 1BS96 indicated increases from ambient to elutriate concentrations in all constituents except for metals due to an increase in detection limits from ambient to elutriate samples. The composite sample 2BS96 indicated an increase in B-BHC, dibutylphthalate, and butylbenzlphthalate concentrations from ambient to elutriate samples. The composite sample 4BS96 indicated an increase in dibutylphthalate concentrations from ambient to elutriate samples. However, these increases in concentrations do not necessarily indicate that the constituents are being released in the water column due to the elutriate test. These increases are due to increases in detection limits from ambient to elutriate concentrations.

C2.3.4.4 Summary of Overall Effects. No significant, long-term changes in water quality will result from the implementation of this project. Because dredging, cofferdam construction, and dewatering activities have only localized, short-term effects, long-term water quality impacts are not expected.

C2.3.5 References.

EPA, Impacts of Construction Activities in Wetlands of the United States, EPA-600/3-76-045, April 1976.

The Mitre Corporation prepared for EPA, Impact of Hydrologic Modifications on Water Quality, April 1975.

John B. Herbich, Handbook of Dredging Engineering, 1992

LDEQ Office of Water Resources, State of Louisiana, Water Quality Management Plan, Volume 5, Water Quality Inventory 1996.

LDEQ Office of Water Resources, Water Pollution Control Reference Materials, Rule: Chapter 11, 1991.